UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,699	02/21/2002	Mamoru Shoji	2002_0276A	6245

513 7590 08/02/2004		EXAMINER
WENDEROTH, LIND & PONACK, L.L.P.		BATTAGLIA, MICHAEL V

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2652	

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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 10/078,699 | Applicant(s) SHOJI ET AL. |
| | Examiner Michael V Battaglia | Art Unit 2652 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _21 February 2001_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 February 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _2_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 4

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers

have been placed of record in the file.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, **the region,** on which the dummy data

is recorded, located adjacent before a sector from which data recording is started and **in the vicinity**

of the most inside area in each of a plurality of zones having a different rotational speed of the disc

at data reproduction must be shown or the feature(s) canceled from the claim(s). No new matter

should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment

of the application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended.

The figure or figure number of an amended drawing should not be labeled as "amended." If a

drawing figure is to be canceled, the appropriate figure must be removed from the replacement

sheet, and where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency. Additional

replacement sheets may be necessary to show the renumbering of the remaining figures. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by

the examiner, the applicant will be notified and informed of any required corrective action in the

next Office action. The objection to the drawings will not be held in abeyance.

Specification

3.   The title of the invention is not descriptive. A new title is required that is clearly indicative

of the invention to which the claims are directed.

4.   The lengthy specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors

of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9, 11, 12, 21, 23, 24, 33, 35 and 36 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

In regard to claims 9, 21 and 33, "the region on which the dummy data is recorded" is

specified as being "in the vicinity of the most inside area in each zone". It is unclear how a single

region can be in the vicinity of the most inside area of more than one zone. The independent

claims 1, 13 and 25, on which claims 9, 21 and 33 are respectively dependent, specify the region as

being "adjacent before a sector from which data recording is started". Page 17, lines 9-19 of the

specification describe

In regard to claims 11, 12, 23, 24, 35 and 36, claims 11, 23 and 35 recite the limitation "the dummy data recorded adjacent before each block included in the contents" in lines 3-5 and claims 12, 24 and 36 recite the limitations "the dummy data recorded adjacent after the final block included in the contents" in lines 1-3 and "the dummy data recorded adjacent after each block included in the contents" in lines 3-4. There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6, 8, 11-13, 16-18, 20, 23-25, 28-30, 32, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Koishi et al (hereafter Koishi) (US 5,850,382).

In regard to claims 1, 13 and 25, Koishi discloses a method of and apparatus for recording data optically onto an optical disk (Fig. 9, element 1') having a plurality of sectors (Figs. 4A and 4B, elements 10 and 30), each sector having a data region (Figs. 4A and 4B, elements 17 and 37) to be recorded with data (Figs. 4A and 4B, element DATA), the data being recorded in units of blocks (Col. 20, lines 19-22), the block being a data unit which includes a predetermined number of sectors and to which error correction is applied (Col. 20, lines 22-24), the method comprising: in recording data related to a content by dividing and recording the data on a plurality of continuous sectors (Col. 20, lines 34-35), recording dummy data on a region adjacent before a sector from which data recording is started (Fig. 9, element 71), the dummy data being used for extracting a

clock for data reproduction (Col. 20, lines 46-52); and recording the data related to the contents on

sectors following the region recorded with the dummy data (Fig. 9, element 5 and Col. 20, lines 61-

67); the apparatus comprising a recording unit that optically records the data to the optical disk,

and a controller that controls the recording operation of the recording unit (Fig. 3, element 100).

Although not shown, the recording unit and controller are necessary to record information on the

optical disc (Col. 9, lines 5-12) and set the power of a laser (Col. 23, line 57).

In regard to claims 4, 16 and 28, Koishi discloses discloses recording dummy data (Figs.

4A and 4B, elements VFO and DMY1) on a front portion (Figs. 4A and 4B, elements 15 and 33)

of each sector (Figs. 4A and 4B, elements 10 and 30) on which data (Figs. 4A and 4B, elements 17

and 37) is recorded.

In regard to claims 5, 17 and 29, Koishi discloses recording dummy data (Fig. 4B, element

DMY2) in an end portion (Fig. 4B, element 34) of a sector (Fig. 4B, element 30) on which data

(Fig. 4B, element 37) is recorded.

In regard to claims 6, 18 and 30, Koishi discloses recording dummy data (Fig. 4B, elements

DMY1 and DMY2) in front (Fig. 4B, element 33) and end portions (Fig. 4B, element 34) of a

sector (Fig. 4B, element 30) on which a data (Fig. 4B, element 37) is recorded.

In regard to claims 8, 20 and 32, Koishi discloses that the dummy data includes iteration of

predetermined patterns (Col. 14, lines 26-31).

In regard to claims 11, 23 and 35, Koishi discloses that the dummy data (Fig. 9, element

71) recorded adjacent before the leading block included in the contents is longer than the dummy

data recorded adjacent before each block included in the contents (Fig. 9). It is noted that the

dummy data (Fig. 9, element 71) has a length of several sectors while the dummy data recorded

adjacent before each block included in the contents is shown having a length of zero.

In regard to claims 12, 24 and 36, Koishi discloses that the dummy data (Fig. 9, element

72) recorded adjacent after the final block included in the contents is longer than the dummy data

recorded adjacent after each block included in the contents. It is noted that the dummy data (Fig.

9, element 72) has a length of several sectors while the dummy data recorded adjacent after each

block included in the contents is shown having a length of zero.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-6, 8, 13-18, 20, 25-30 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kuroda et al (hereafter Kuroda) (US 6,252,838) in view of Koishi.

In regard to claims 1, 13 and 25, Kuroda discloses a method of and apparatus for

recording data optically onto an optical disk (Fig. 3, element 1) having a plurality of sectors (Fig. 2,

element 40), each sector having a data region (Fig. 2, element 41) to be recorded with data, the

data being recorded in units of blocks (Fig. 2, element 30), the block being a data unit which

includes a predetermined number of sectors and to which error correction is applied (Col. 6, lines

52-56), the method comprising: in recording data related to a content by dividing and recording the

data on a plurality of continuous sectors (Fig. 2), recording dummy data on a region adjacent

before a sector from which data recording is started (Fig. 5, elements 44 and 45); and recording the

data related to the contents on sectors following the region recorded with the dummy data (Fig. 5,

NEW DATA); the apparatus comprising a recording unit (Fig. 3, element 2) that optically records

the data to the optical disk, and a controller (Fig. 3, elements 8-11) that controls the recording

operation of the recording unit. Kuroda does not disclose that the dummy data is used for

extracting a clock for data reproduction. It is noted, however, that the dummy data of Kuroda is

recorded in sync frames (Fig. 5, element 42).

Koishi discloses dummy data that is used for extracting a clock for data reproduction and

teaches that by doing so, the clock of the reproduction circuit is promptly stabilized (Col. 9, lines

15-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to make the dummy data of Kuroda usable for extracting a clock for data

reproduction as suggested by Koishi, the motivation being to promptly stabilize the clock of the

circuit used for reproduction.

In regard to claims 2, 14 and 26, Kuroda discloses that the region adjacent before on which

the dummy data is recorded is a sector adjacent before the sector from which data recording is

started (Fig. 5 and Col. 10, lines 51-53).

In regard to claims 3, 15 and 27, Kuroda discloses that the region adjacent before on which

the dummy data is recorded is a region between the blocks (Fig. 5).

In regard to claims 4, 16 and 28, Kuroda does not disclose that the dummy data is

recorded on a front portion of each sector on which the data is recorded.

Koishi discloses recording dummy data (Figs. 4A and 4B, elements VFO and DMY1) on a

front portion (Figs. 4A and 4B, elements 15 and 33) of each sector (Figs. 4A and 4B, elements 10

and 30) on which data (Figs. 4A and 4B, elements 17 and 37) is recorded. Koishi teaches that the

dummy data is used to promptly stabilize the clock of the circuit used for reproduction (Col. 14, lines 26-31 and Col. 15, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to record dummy data on a front portion of each sector of Kuroda on which the data is recorded as suggested by Koishi, the motivation being to promptly stabilize the clock of the circuit used for reproduction.

In regard to claims 5, 17 and 29, Kuroda does not disclose that the dummy data is recorded in an end portion of each sector on which the data is recorded.

Koishi discloses recording dummy data (Fig. 4B, element DMY2) in an end portion (Fig. 4B, element 34) of a sector (Fig. 4B, element 30) on which data (Fig. 4B, element 37) is recorded. Koishi teaches that the dummy data is used to promptly stabilize the clock of the circuit used for reproduction (Col. 15, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to record dummy data in an end portion of each sector of Kuroda on which the data is recorded as suggested by Koishi, the motivation being to promptly stabilize the clock of the circuit used for reproduction.

In regard to claim 6, 18 and 30, Kuroda does not disclose that the dummy data is recorded in front and end portions of each sector on which the data is recorded.

Koishi discloses recording dummy data (Fig. 4B, elements DMY1 and DMY2) in front (Fig. 4B, element 33) and end portions (Fig. 4B, element 34) of a sector (Fig. 4B, element 30) on which a data (Fig. 4B, element 37) is recorded. Koishi teaches that the dummy data is used to promptly stabilize the clock of the circuit used for reproduction (Col. 15, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to record dummy data in front and end portions of each sector of Kuroda on

which the data is recorded as suggested by Koishi, the motivation being to promptly stabilize the

clock of the circuit used for reproduction.

In regard to claim 8, 20 and 32, Kuroda does not disclose that the dummy data includes

iteration of predetermined patterns.

Koishi discloses dummy data that includes iteration of predetermined patterns (Col. 14,

lines 26-31). Koishi teaches that the iteration of predetermined patterns in the dummy data allows

prompt stabilization of the clock of the circuit used for reproduction (Col. 14, lines 26-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include iteration of predetermined patterns in the dummy data of Kuroda

as suggested by Koishi, the motivation being to promptly stabilize the clock of the circuit used for

reproduction.

8.   Claims 1, 7, 13, 19, 25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kuroda in view of Takemura et al (hereafter Takemura) (US 5,923,640).

In regard to claims 1, 13 and 25, Kuroda a method of and apparatus for recording data

optically onto an optical disk (Fig. 3, element 1) having a plurality of sectors (Fig. 2, element 40),

each sector having a data region (Fig. 2, element 41) to be recorded with data, the data being

recorded in units of blocks (Fig. 2, element 30), the block being a data unit which includes a

predetermined number of sectors and to which error correction is applied (Col. 6, lines 52-56), the

method comprising: in recording data related to a content by dividing and recording the data on a

plurality of continuous sectors (Fig. 2), recording dummy data on a region adjacent before a sector

from which data recording is started (Fig. 5, elements 44 and 45); and recording the data related to

the contents on sectors following the region recorded with the dummy data (Fig. 5, NEW DATA);

the apparatus comprising a recording unit (Fig. 3, element 2) that optically records the data to the

optical disk, and a controller (Fig. 3, elements 8-11) that controls the recording operation of the

recording unit. Kuroda does not disclose that the dummy data is used for extracting a clock for

data reproduction. It is noted, however, that the dummy data of Kuroda is recorded in sync

frames (Fig. 5, element 42).

Takemura discloses dummy data that is used for extracting a clock for data reproduction

and teaches that by doing so, the oscillation frequency of the reproduction circuit is set (Col. 8,

lines 49-54 and Col. 9, line 66-Col. 10, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to make the dummy data of Kuroda usable for extracting a clock for data

reproduction as suggested by Takemura, the motivation being to set the oscillation frequency of

the reproduction circuit.

In regard to claim 7, 19, and 31, Takemura discloses that the dummy data includes a

synchronizing pattern with a single frequency (Col. 10, lines 2-3).

In regard to claim 11, 23 and 35, Kuroda discloses dummy data (Fig. 5, elements 44 and

45) recorded adjacent before the leading block included in the contents (Fig. 5, element 30 of the

additional recording). Kuroda does not disclose that dummy data is recorded adjacent before each

block included in the contents. It is noted that

Takemura discloses recording dummy data in an end portion (Fig. 7, bracket including

PAD2 and PA at the far right of the sector) of a sector (Fig. 7, element SECTOR) on which data

(Fig. 4B, element DATA) is recorded. Koishi teaches that the dummy data is used to set the

oscillation frequency of the reproduction circuit (Col. 8, lines 50-55 and Col. 10, lines 16-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to record dummy data in an end portion of each sector of Kuroda on which

the data is recorded as suggested by Takemura, the motivation being to set the oscillation

frequency of the reproduction circuit.

9.   Claims 9, 21 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kuroda in view of Koishi as applied to claims 1, 13 and 25 above, and further in view of Takahashi

(US 5,878,020).

Kuroda in view of Koishi discloses the method of claim 1, apparatus of claim 13, and

optical disc of claim 25, wherein dummy data, used for extracting a clock for data reproduction, is

recorded on a region adjacent before a sector from which data recording is started. Koishi does

not disclose that when a region to be recorded with data in the optical disk is divided into a

plurality of zones each having a different rotational speed of the disk at data reproduction, the

region on which the dummy data is recorded is in the vicinity of the most inside area in each zone.

Takahashi discloses that when a region to be recorded with data in the optical disk is

divided into a plurality of zones each having a different rotational speed of the disk at data

reproduction, a large recording capacity is ensured in the entire disc (Fig. 6 and Col. 10, lines 10-

14). Takahashi further discloses that the data recorded in the data are of each zone consists of full

blocks of data sectors.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to divide a region to be recorded with data in the optical disk of Kuroda in

view of Koishi as applied to claims 1, 13 and 25 into a plurality of zones each having a different

rotational speed of the disk at data reproduction as suggested by Takahashi, the motivation being

to ensure a large recording capacity in the entire disc. It is noted that the region of Kuroda in view

of Koishi is adjacent before the sector in which data recording is started. Therefore, when data

recording is started in the first data recording sector of each zone of Takahashi, there will be a

region in the vicinity of the most inside area in each zone.

10.   Claims 10, 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Koishi in view of Mine (US 5,966,358).

Koishi discloses the method of claim 1, apparatus of claim 13, and optical disc of claim 25,

but does not disclose that when the data recording is suspended during the recording of data

related to the content, the dummy data is recorded on a region adjacent before a sector from

which the data recording of data related to the content is re-started.

Mine discloses recording dummy data on a region adjacent before a sector from which the

data recording of data related to the content is re-started when the data recording is suspended

during the recording of data related to the content to handle the occurrence of a defective sector

(Col. 6, lines 48-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to record dummy data on a region adjacent before a sector from which the

data recording of data related to the content is re-started when the data recording is suspended

during the recording of data related to the content of Koishi as suggested by Mine, the motivation

being to handle the occurrence of a defective sector.

Citation of Relevant Prior Art

11.   Kuroda et al (US 6,269,059) discloses recording old dummy data at the end of a final block

of contents data wherein the old dummy data becomes the first two sync frames of first sector of

the first block of additional contents information and wherein the old dummy data is used for

extracting a reproduction clock (Fig. 7). Fukushima et al (US 5,138,599) discloses dummy data

areas between zones of an MCAV format optical disc (Fig. 1).
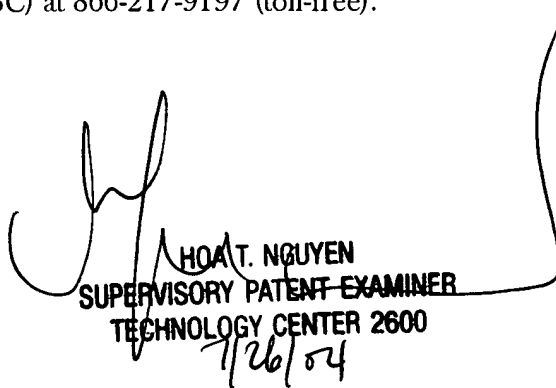
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The

examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization

where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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